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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,779	10/12/2001	Shih-Fu L. Lee	8033021/JAS	9567

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EXAMINER

STOCK JR, GORDON J

ART UNIT PAPER NUMBER

2877

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,779

Applicant(s)

LEE ET AL.

Examiner

Gordon J Stock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-15 is/are allowed.
- 6) ☒ Claim(s) 1-10 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the means for operating, means for taking a radial moving average, means for taking a radial derivative, means for building a curvature profile, means for comparing said curvature profile of claim 17 (because it is not evident from Figs. 5a and 5b that these features are shown) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. **Claim 1** is objected to for the following: "representative slop" of line 9 should read – representative slope--; "being average" of line 12 should read –being an average--. Corrections required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. **Claim 17** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the

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inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, the limitations following the scanning means and storage means do not appear to be reasonably conveyed in the disclosure, "means for operating ... means for comparing." The method steps related to these means plus function limitations are disclosed in reference to Fig. 6.

However, it is not apparent that the particular means for executing these steps are disclosed.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1-10 and 17** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. As for **claims 1 and 17**, the term 'n' in 'n radial lines' is indefinite, for it is unclear if the term means the number or the type of radial line. As for **claim 7**, the term 'm' is indefinite, for as written it is unclear if the term means the number or type of tracks. **Claims 2-10** are rejected for depending from a rejected base claim. If 'n' and 'm' are numerical, 'n' and 'm' are also relative terms making the quantity of radial lines and tracks indefinite. Clarification/correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identical to the prior art if the differences between the subject matter claimed and the prior art are such that the subject matter as a whole would have been obvious to a person having ordinary skill in the art to which said subject matter pertains at the time the invention was made.

9. **Claims 1, 2, 3, 5, and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Meeks et al. (6,392,749)** in view of **Tian et al. (5,497,085)**.

As for **claims 1, 2, 3, 5, and 6**, Meeks discloses a profilometer and that stores data representing slopes of tracks along radii and determining the slope from the data from the optical signal; taking a radial moving average along a plurality of radial lines; building a curvature profile, height profile, and comparing said profile to a preestablished limit to determine the disc's suitability based upon the profiles, histograms and comparing the profile to a pre-established profile of an acceptable disc area; taking the average of the measured slope at the same circumferential track (col. 11, lines 20-55; col. 17, lines 25-35; col. 17, lines 55-65; col. 30, lines 15-60; col. 33, lines 55-67; col. 34, lines 1-55). He also mentions testing film head flying and dragging (col. 14, lines 65-67) and mapping features that protrude above the mean fly-height of the head (col. 22, lines 5-7). As for taking a radial derivative, a slope is a derivative taken at a particular radial placement on the disc being inspected. Meeks discloses rotating the disc by a multiplicity of revolutions, scanning the disc, and averaging data for minimizing signal to noise fluctuations and suggests that the disc comprises a plurality of tracks for tracking occurs (Figs. 34-37; col. 17, lines 40-67; col. 18, lines 1-25). Tian in a method for determining an outer diameter roll off teaches that magnetic disks comprise a plurality of tracks (Fig. 2). Therefore, it would be obvious that the slopes derived would comprise a plurality of tracks for magnetic discs comprise a plurality of tracks, and due to the fact that the whole disk is profiled guaranteeing a plurality of tracks to be evaluated (Fig. 34). As for calculating slope at a plurality of points, the whole disc is profiled suggesting a plurality of points such as 1024 and that the slopes and all other calculations would be averaged to minimize signal to noise errors; and since data at a

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particular revolution is averaged together a constancy of distance for a particular revolutionary state would be assumed (Fig. 34 and col. 17, lines 40-67). As for the method being performed on a magnetic disc's substrate, the method is performed on the lube layer, absorptive carbon layer, and magnetic layers which are types of substrates (Figs. 5a-5c).

Allowable Subject Matter

10. **Claims 11-15** are allowed.

Claims 4, 7-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

As to **claim 4**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method for testing a magnetic disc "the method is performed on an aluminum substrate prior to deposition of any of the recording layers," in combination with the rest of the limitations of **claim 4**.

As to **claim 7**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method for testing a magnetic disc "developing an average over a plurality of discs over a plurality of tracks sufficient in number to eliminate spikes from appearing in the differentiation step," in combination with the rest of the limitations of **claim 7-10**.

As to **claim 11**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a method for testing a magnetic disc "wherein the radial length of each number of tracks is chosen to eliminate spikes from appearing in a differentiation step," in combination with the rest of the limitations of **claims 11-15**.

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Response to Arguments

11. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. In regards to the arguments in regards to Meeks et al. (6,392,749), please refer to rejection under 35 U.S.C. 103(a) above.

Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 872-9306

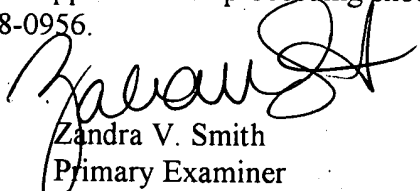
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431.

The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

gs

May 27, 2004


Zandra V. Smith
Primary Examiner
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